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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/994,751	11/28/2001	Motohiko Sakamaki	111222	8650

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EXAMINER

NGO, HUYEN LE

ART UNIT	PAPER NUMBER
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2871

DATE MAILED: 07/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Applicati n No.

09/994,751

Applicant(s)

SAKAMAKI ET AL.

Examiner

Julie-Huyen L. Ngo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Priority***

Receipt is acknowledged of paper submitted under 35 U.S.C. 119(a)-(d), which paper has been placed of record in the file.

### ***Specification***

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The disclosure is objected to because it fails to sufficiently provide support for the limitation "an adhesive property of the surface of the at least one spacer opposing the one of the substrates is lower than an adhesive property of another of the substrates" recited in claim 8.

It is unclear from the specification how to "superimposing the substrates such that substantially no color material particles are disposed on a surface of the at least one spacer opposing one of the substrates" as recited in claim 7.

Appropriate correction is required.

### ***Claim Objections***

Claims 1-9 are objected to because of the following informalities:

In lines 2-3 of claim 1, the recitation "disposing a plurality of color material particles distributed substantially uniformly on at least one of the substrates", can be construed that the plurality of color material particles are distributed substantially uniformly on more than one of the substrates. This is inconsistent with what being

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disclose in the specification and drawings, which disclose that the plurality of color material particles are distributed substantially uniformly on one of the substrates.

A similar problem as set forth above in claim 1 exists in claim 7.

All claims that are depended from the above-mentioned claims and are not specifically discussed above are objected as bearing the defects of the claims from which they depend.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are: steps of charging the color material particles and spraying the color material particles, which appears to be the necessary steps in order to supply the color material particles to the at least one substrate using an electric field. Note that these limitations are not disclosed in original specification.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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Claims 1, 7 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Kamio et al. (US6154265A).

Kamio et al. teach (col. 45, line 52 to col. 48, line 24; and Figs. 16-19) an image display medium and a method of manufacturing said image display medium comprising: (Claims 1 and 7)

- providing substantially flat substrates 122a/122b, one of which having at least one spacer 121 disposed thereon;
- disposing a plurality of color material particles distributed substantially uniformly on one/first of the substrates 122b; while maintaining a predetermined amount of the plurality of color material particles distributed on said one substrate
- superimposing another/second substrate 122a thereon
- fixing the substrates to one another using the at least one spacer

wherein

(Claim 12)

- the another/second substrate being superimposed with the one/first substrate with the at least one spacer there between such that a substantially contact distance is maintained between the substrates; an
- the plurality of color material particles are disposed between the substrates, and the spacer comprises a shape that tapers toward the side thereof facing the first flat substrate.

Claims 7 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Kobayashi et al. (US6099630A).

Kobayashi et al. teach (Fig. 4) a method of manufacturing an image display medium comprising the steps of:

- providing substantially flat substrates, one of which having at least one spacer disposed thereon, the substrates being fixable to one another using the at least one spacer interposed between the substrates;
- disposing a plurality of color material particles on at least one of the substrates; while maintaining the color material particles on the at least one of the substrates,
- superimposing the substrates such that substantially no color material particles are disposed on a surface of the at least one spacer opposing one of the substrates;
- fixing the substrates to one another using the at least one spacer.

wherein an adhesive property of the surface of the at least one spacer opposing the one of the substrates is lower than an adhesive property of another of the substrates according to claim 8.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 7 and 9 are provisionally rejected under 35 U.S.C. 102(e) as being anticipated by copending Application No. US 20020050976 A1 of Yamaguchi et al., which has at least one common inventor with the instant application. Based upon the earlier effective U.S. filing date of the copending application, it would constitute prior art under 35 U.S.C. 102(e), if published under 35 U.S.C. 122(b) or patented. This provisional rejection under 35 U.S.C. 102(e) is based upon a presumption of future publication or patenting of the copending application.

This provisional rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the copending application was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131. This rejection may not be overcome by the filing of a terminal disclaimer. See *In re Bartfeld*, 925 F.2d 1450, 17 USPQ2d 1885 (Fed. Cir. 1991).

Yamaguchi et al. teach (Fig. 4) a method of manufacturing an image display medium comprising the steps of:

- providing substantially flat substrates, one of which having at least one spacer disposed thereon, the substrates being fixable to one another using the at least one spacer interposed between the substrates;

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- disposing a plurality of color material particles on at least one of the substrates; while maintaining the color material particles on the at least one of the substrates,
- superimposing the substrates such that substantially no color material particles are disposed on a surface of the at least one spacer opposing one of the substrates;
- fixing the substrates to one another using the at least one spacer.
- removing the color material particles from the surface of the at least one spacer opposing the one of the substrates by vibrating the at least one spacer (paragraph 7, "removing the colored particles from the display surface in the non-image area to display the white color of the white liquid" where the non-image area includes spacers) according to claim 9.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-6 and 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kamio et al. (US6154265A) as applied to claims 1, 7 and 12 above.



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With respect to claims 1, 3, 5 and 10, Kamio et al. teach (Fig. 11, the fourth embodiment) a method of manufacturing an image display medium comprising the steps of:

- providing substantially flat substrates, one of which having at least one spacer disposed thereon;
- disposing a plurality of color material particles distributed substantially uniformly on at least one of the substrates; while maintaining a predetermined amount of the plurality of color material particles distributed on the at least one substrate,
- superimposing another substrate thereon;

wherein

(Claim 3 and 10)

- the step of disposing the plurality of color material particles comprises the sub-steps of: dispersing the color material particles by spraying in a gas or air; thereafter supplying the color material particles to the at least one substrate

(Claim 5)

- the step of disposing the plurality of color material particles comprises the sub-steps of: accommodating a predetermined quantity of the color material particles in a receptacle; thereafter supplying the color material particles from the receptacle to the at least one substrate

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With respect to claims 1, 4 and 11, Kamio et al. teach (Fig. 4, the first embodiment, col. 38 lines 66-67) a method of manufacturing an image display medium, the method comprising the steps of:

(Claim 1)

- providing substantially flat substrates, one of which having at least one spacer disposed thereon;
- disposing a plurality of color material particles distributed substantially uniformly on at least one of the substrates; while maintaining a predetermined amount of the plurality of color material particles distributed on the at least one substrate,
- superimposing another substrate thereon;

(Claims 4 and 11)

- wherein the step of disposing the plurality of color material particles comprises the sub-steps of: dispersing the color material particles in a liquid; thereafter supplying the color material particles to the at least one substrate (the resins is used in a form of solution by using a hydrophilic solvent, such as water or alcohol, providing a relatively-high surface energy, singly or in combination).

With respect to claims 1 and 6, Kamio et al. teach (Figs. 12A-H, the fourth embodiment, col. 38 lines 66-67) a method of manufacturing an image display medium, the method comprising the steps of:

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(Claim 1)

- providing substantially flat substrates, one of which having at least one spacer disposed thereon;
- Disposing a plurality of color material particles distributed substantially uniformly on at least one of the substrates; while maintaining a predetermined amount of the plurality of color material particles distributed on the at least one substrate,
- superimposing another substrate thereon;

(Claim 6)

- after the step of disposing the plurality of color material particles, the step of removing an excess of the color material particles with a blade 100.

However, the first and fourth embodiments do not specifically disclose that the at least one spacer fixes the substrates to one another.

It is well known and conventional in the art for using at least one spacer to fix the substrates to one another for supporting the substrates to provide a cell gap.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify a method of manufacturing an image display medium as Kamio et al. (the first and fourth embodiments) disclosed by using the at least one spacer to fix the substrates to one another for supporting the substrates to provide the cell gap.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Kashiwazaki (US6475683B1) discloses process for producing a color filter, which comprises arranging a light-transmitting colored part on a surface of a base plate by applying ink onto the base plate by an ink-jet system.

Cernigliaro et al. (US5885343A) disclose the prepared pigments are useful in the formation of color films and their optical properties are described. Photoresists using nanosized pigments are also disclosed therein, which are useful in making color filters for liquid crystal displays.

Suginoya et al. (US4639088A) disclose a liquid crystal display having a multi-color display is fabricated with a plurality of display electrodes on a first substrate, on which a color filter is selectively formed by electro-depositing a polymer together with coloring matter and electroconductive particles so that the display electrodes have different colors and electroconductivity.

### ***Contact Information***

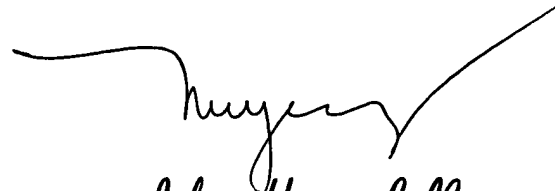
Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Julie-Huyen L. Ngo whose telephone number is (703) 305-3508. The Examiner can normally be reached on T-Friday.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's Supervisor, Mr. Robert H. Kim can be reached at (703) 305-3492.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

July 13, 2003

A handwritten signature in black ink, appearing to read "Julie-Huyen L. Ngo". The signature is fluid and cursive, with a long horizontal stroke at the beginning and a sharp upward curve at the end.

*Julie-Huyen L. Ngo*

**Patent Examiner**

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